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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,158	03/01/2004	Chao-Chin Sung	250122-1290	3430

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT PAPER NUMBER

2629

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,158

Applicant(s)

SUNG, CHAO-CHIN

Examiner

Jennifer T. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipate by Inukai (Pub. No. US 2002/0180671).

Regarding claims 1 and 13, Inukai teaches a driving method for an active matrix OLED display (fig. 1B), wherein the display has at least one pixel (100, fig. 1A), each having a switch transistor (101), a driving transistor (102), an OLED (105) and a storage capacitor (103), the switching transistor (101) has a control terminal coupled to a scan electrode (Gj) and a first terminal coupled to a data electrode (Si), the driving transistor has a control terminal coupled to a second terminal of the switching transistor and a first terminal coupled to a power voltage (Vi), the OLED has an anode couple to the second terminal of the driving transistor and a cathode coupled to a common electrode, and the storage capacitor has one terminal coupled to the control terminal of the driving transistor [0099]-[0105], the driving method comprising:

providing a first current to flow through the OLED of the pixel in a first period of one display period, according to a video signal on the data electrode and a scan signal on the scan electrode [0035]; and

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providing a second current to flow through the OLED in a second period of the display period to neutralize carrier accumulation inside the OLED, wherein the first current and the second current flow in opposite directions [0036].

Regarding claims 2, 8, and 14, Inukai teaches the second current is produced by pulling the potential at the anode of the OLED to lower than that at the cathode of the OLED [0032], [0036]-0037].

Regarding claims 3, 9, and 15, Inukai teaches the second current is produced by pulling the potential at the cathode of the OLED to higher than that at the anode of the OLED [0032], [0036]-0037].

Regarding claims 4, 10, and 16, Inukai teaches the second current is produced by applying a negative voltage across the anode and the cathode of the OLED [0128].

Regarding claims 5, 6, 10, and 11, Inukai teaches the time for an organic light emitting element receives reverse bias can be adjusted [0148]. Therefore, he teaches the time ratio of the first period to the second period is adjustable.

Regarding claim 7, Inukai further teaches a second current to the OLED of the pixel in a second display period (second sub-frame period), according to a second video signal on the data electrode and a second scan signal on the scan electrode;

providing a third current to the OLED of the pixel in a first period of a third display period (third sub-frame period), according to a third video signal on the data electrode and a third scan signal on the scan electrode; and

providing the reverse current to the OLED in a second period of the third display period to neutralize carrier accumulation inside the OLED, wherein the third current and the reverse current flow in opposite directions [0132]-[0137].

Regarding claim 17, Inukai teaches a pixel structure (100, fig. 1A) for active matrix OLED display (fig. 1B), comprising:

- a switching transistor (101) having a control terminal coupled to a scan electrode (Gj) and a first terminal coupled to a data electrode (Si);

- a driving transistor (102) having a control terminal coupled to a second electrode of the switching transistor and a first terminal coupled to a power voltage (Vi);

- an OLED (101) having an anode coupled to the second terminal of the driving transistor, and a cathode coupled to a common electrode;

- a storage capacitor (103) having one terminal coupled to the control terminal of the driving transistor; and

- a neutralization control circuit (104) coupled between the OLED and a first voltage, according to a control signal, to pull down the potential at the anode of the OLED thereby inducing a reverse current to neutralize carrier accumulation inside the OLED, wherein the potential of the first voltage is lower than that at the cathode of OLED [[0130]-[0131].

Regarding claim 18, Inukai teaches the neutralization control circuit (104) is a transistor having a control terminal coupled to the control signal, a first terminal coupled to the anode of the OLED and a second terminal coupled to the first voltage [0102]-[0104].

3. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure: US 6,583,581 and US 6,809,481.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696.

The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
8/11/06


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